



The Egyptian Academy  
of Scientific Research & Technology  
Council of Mineral Resources  
Specialized Maps Committee



The Ministry of Industry  
& Technology  
Egyptian Geological Survey  
& Mining Authority

NH 35 NH 36  
Sheet No. I Sheet No. II  
**Explanatory Note**  
**The Metallogenic Map of Egypt**  
Scale 1:1,000,000

NG 35 NG 36  
Sheet No. III Sheet No. IV  
**The Egyptian Geological  
Survey and Mining Authority**

Cairo - 2001

Fig 2: Simplified Legend For The Precambrian Terrane (After Takla & Hussein, 1995)

UNCONFORMITY			
PRECAMBRIAN	Pan - African	CONTINENTAL MARGIN AND INTRAPLATE ROCKS:	
		Alkali feldspar granites (G3 granites - Younger Granites)	Nb, Ta, Sn, W, Ma, Be, F
		Calc-alkaline, weakly deformed granitoids (G2 granites - Younger Granites)	Ba, U, Th
		Gabbro-peridotite intrusive (Younger Gabbro)	Ti, Fe (V)
		Molasse sediments (Hammamat Clastics)	
		Andesite-dacite-rhyolite (Dokhan Volcanics)	Cu, Au (Porphyry) Imp. por
Pre Pan - African	Pan - African	Diorite-tonalite-granodiorite (G1 granites -Older Granites)	Au
		OPHIOLITIC MELANGE AND ISLAND ARC ASSOCIATION:	
		Mainly metasedimentary matrix comprising blocks of meta- ultramafites, metagabbros, mafic metavolcanics, and felsic metavolcanics.	(BIF), (Cu-Pb-Zn), Au, Cr, Ta, Mg, Asb, Ver, Emerald, Corundum
Pre Pan - African	Pan - African	OLD CONTINENTAL CRUST:	
		Gneisses, migmatites, amphibolites, and high grade schists.	Gneisses, (BIF)

Fig 3

# Simplified Legend For Phanerozoic Sedimentary Rock Units

## EXPLANATION

### QUATERNARY

#### Holocene

**Qsd**

Sand dunes

**Qns**

Nile silt, cultivated

**Qsb**

Sabkha and salt crust

**Qon**

Older Nile sediments: gravels, and conglomerate, with sand and silt

Undivided Quaternary - wadi, playa and spring deposits in the south Western Desert; gravels in patches topping middle-latitudes limestone plateaux; raised coral reefs and gravel terraces along the Red Sea coastal zone, Gulf of Suez, and Gulf of 'Aqabah; beach placers along the northern coast, alluvial placers in wadis

Pleistocene and younger - Coastal bars of oolitic limestone west of Alexandria, with main development in the Arabs Gulf area.

### TERTIARY

Pliocene - Oolitic limestone along the coastal areas of the north Western Desert; sandstone with chalky limestone and gypsum north of Wadi an Natrun; porcelaneous limestone with chert in Cairo-Suez district; limestone and coquina beds along the northern part of the Nile Valley; red breccia with limestone lithoclasts, conglomerate and finer siliciclastics along the Nile in Upper Egypt; siliciclastics, bioclastics and reefal beds along the Red Sea coastal zone.

Post-Miocene (undifferentiated) - Light-coloured, continental to lacustrine sandstone with root marks; yellow siltstone and limestone with borings and gastropods type locality foot hills of the southwest tip of al Qattarah depression. To the south it is patchy but occasionally extensive, and truncating Cretaceous to Eocene rocks.

Upper Miocene - Sandstone and/or arenaceous carbonates in Cairo - Suez area; siliciclastics and limestone along the Red Sea coast.

Middle Miocene - Biogenic carbonates with marl and shale in the north Western Desert; calcareous grit and sandy limestone interfingering with gypsum in 'Ataqah area; reefal carbonates, shale, marl and sandstone carbonate layers along the Red Sea coastal stretch; gypsum and anhydrite with carbonate and shale intercalations around the Gulf of Suez; in patches along the Red Sea coastal stretch Evaporites probably extend into Upper Miocene.

Lower Miocene - Mostly siliciclastics with minor carbonates, in the north Western Desert; coarse sand and gravel west of Cairo; sandstone, conglomerate, gritty or oyster limestone, and shale around the Gulf of Suez; fanglomerates, sand and shale along the Red Sea coast.

## METALLOGENY

K, Na, WS.

"Eg. Alab" - Trav  
Beach and alluvial  
placers, silica glass

"Eg. Alab" - Trav

Pb & Zn, Mn, Ba

Pb & Zn, S, K,  
Mn, Ba, Gyp, Sr

## PALEOZOIC

**Pz**

**Pzc**

**Pzu**

**Tr**

**J**

**Kl**

**Kuc**

**Kv**

**Kua**

**rc**

**Tei**

**Tem**

**Teu**

**To**

**Tv**

**Tm**

**Tml**

**Tmm**

**Tmu**

**Red**

**CRETACEOUS**

**Ring complexes (mostly alkaline syenites).**

**Syenite**

**CRETACEOUS (Senonian) includes:**

**a) Campanian and Maastrichtian - Siliciclastics and carbonates with phosphate beds in the south Western Desert, Nile Valley in Upper Egypt and Red Sea coast, shales in north Egypt.**

**b) Coniacian and Santonian - Carbonate-siliciclastic sequence with zones of oolitic limestone in Awan area and Wadi Oina, fossiliferous mudstones in northern part of Egypt.**

**Wadi Natran Volcanics - Dominantly alkaline basalt, andesite and trachyte**

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**Lower Cretaceous - Sandstone and calcareous sandstone with oolitic limestone in northern Sinai; Khatib sandstone in central and southern Sinai and west of the Gulf of Suez.**

**Lower Cretaceous-Jurassic? - Sandstones and conglomerates, in some areas of southern Egypt.**

**JURASSIC - Alternating Ruvale and marine siliciclastics, limestone, coal seams, and shallow marine carbonates, topped by dense carbonate beds with abundant chert in northern Sinai.**

**TRIASSIC - Clastic-carbonate complex with anhydrite and gypsum intercalations at northeastern Sinai.**

**UPPER PALEOZOIC - Siliciclastics with dolomite and crinoid limestone, along the northwestern slopes of Northern Jalah, probably of Permian age. Uppermost unit of red coloured clastics and thin marine intercalations, in Northern Jalah, Wadi Arabah and central Sinai, probably of Permian-Triassic age.**

**CARBONIFEROUS - Dolomitic limestone hosting manganese deposits overlain by siliciclastics, occasionally carbonaceous, in central Sinai, siliciclastics and crinoid limestone west of the Gulf of Suez; siliciclastics and oolitic boulders overlie by carbonaceous clastics in Jalah at 'Uwaynat Abu Ra's area in the south Western Desert.**

**UNDIFFERENTIATED PALEOZOIC (pre-Carboniferous) - siliciclastics, in western and central Sinai, north Eastern Desert, the northeastern slopes of Jebel al 'Uwaynat and in the western foreland at al Jif at Kaba-Abu Rik's Plateau, in the south Western Desert.**

**CU**

**Mn, Cu, U, Co**

**Coal, Fe, Kact.**

**Fe, WS.**

**Fe, Kact, WS**

**P**

**Syenite**

**Lower Eocene - Limestone with chert bands and concretions, and variable shale content on both sides of the Nile in Upper Egypt, in the south Western Desert and in central Sinai.**

**Middle Eocene - Nummulitic limestone and chalk, occasionally with chert in the Cairo-Nile divide with variably increasing shale and argillaceous limestone intercalations to its east and west.**

**Upper Eocene - Calcareous sandstone with carbonaceous claystone and siltstone in al Fayyum area; shale with limestone and sandstone intercalations east of Cairo.**

**Oligocene - Clastics and gravel sheets in the Cairo - Suez and Cairo-al Fayyum - al Bahariya stretches and on top of Eocene plateau west of the Nile, conglomerate, siltstone, porcelaneous limestone in central Sinai; conglomerate in al Ousayr - Bahariya area; argillaceous limestone, at the foot of al Salum escarp in the Western Desert.**

**Oligo - Miocene - Basalts and dolerites.**

**Pandote**

**Undifferentiated Miocene.**

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